Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A transceiver comprising:

a receiver to receive an analog communication signal, the analog communication signal containing an interference signal;

a digital compensation circuit to generate a digital replica of the interference signal contained in the analog communication signal;

a converter to convert the digital replica of the interference signal into a corresponding analog replica of the interference signal; and

a subtraction circuit to subtract the analog replica of the interference signal from the analog communication signal,

wherein the digital compensation circuit includes a near-end crosstalk (NEXT) canceller to generate a digital replica of a NEXT interference signal in the analog communication signal,

wherein the digital compensation circuit further:

determines cancellation coefficients that model an impulse response of the interference signal; and

multiplies the cancellation coefficients with a communication signal from a transmitter that causes the interference signal.

2. (Original) The transceiver of claim 1, wherein the digital compensation circuit includes an echo canceller to generate a digital replica of an echo interference signal in the analog communication signal.

3. (Canceled)

4. (Original) The transceiver of claim 1, further comprising an analog- to-digital converter (ADC) to sample the analog communication signal having the analog replica subtracted therefrom, and generate a digital signal that is substantially devoid of the interference signal.

5. (Original) The transceiver of claim 4, further comprising a first-in-first-out (FIFO) buffer to receive the digital signal and store the digital signal on a first-in-first-out basis.

6. (Original) The transceiver of claim 5, further comprising a feed forward equalizer (FFE) to receive the digital signals from the FIFO buffer, the FFE operable to filter individual digital signals.

7. (Currently amended) The transceiver of claim 6, wherein the [[EFE]] FFE is a least means square (LMS) type adaptive filter.

8. (Original) The transceiver of claim 6, further comprising a data detector to detect data from the filtered individual digital signals.

9. (Original) The transceiver of claim 8, wherein the data detector is a Viterbi detector.

10. (Original) The transceiver of claim 8, wherein the data is a data symbol.

11. (Original) The transceiver of claim 1, wherein the transceiver is IEEE 1000Base-TX complaint.

12. (Previously presented) A method for reducing interference signals in an analog

communication signal, the method comprising:

receiving an analog communication signal through a receiver, the analog communication signal containing an interference signal;

generating a digital replica of the interference signal contained in the analog communication signal;

converting the digital replica of the interference signal into a corresponding analog replica of the interference signal; and

subtracting the analog replica of the interference signal from the analog communication signal to substantially cancel the interference signal from the analog communication signal,

wherein the interference signal includes a NEXT interference signal, and

wherein generating a digital replica of the interference signal includes:

determining cancellation coefficients that model an impulse response of the interference signal; and

multiplying the cancellation coefficients with a communication signal from a transmitter that causes the interference signal.

13. (Previously presented) The method of claim 12, wherein the interference signal further includes an echo interference signal.

14-15. (Canceled)

16. (Previously presented) The method of claim 12, wherein determining cancellation coefficients includes determining cancellation coefficients using an adaptive filter.

17. (Original) The method of claim 12, further comprising sampling the analog communication signal having the analog replica subtracted therefrom with an analog-to-digital converter (ADC) to create a digital communication signal.

18. (Original) The method of claim 12, wherein generating a digital replica of the interference signal includes generating a digital replica of a portion of the interference signal.

19. (Original) The method of claim 18, wherein the portion of the interference signal includes high voltage portions of the interference signal.

20. (Previously presented) A transceiver comprising:

receiving means for receiving an analog communication signal, the analog communication signal containing an interference signal;

generating means for generating a digital replica of the interference signal contained in the analog communication signal;

converting means for converting the digital replica of the interference signal into a corresponding analog replica of the interference signal; and

subtracting means for subtracting the analog replica of the interference signal from the analog communication signal to substantially cancel the interference signal from the analog communication signal,

wherein the generating means includes means for generating a digital replica of a NEXT interference signal in the analog communication signal, and

wherein the generating means further:

determines cancellation coefficients that model an impulse response of the interference signal; and

multiplies the cancellation coefficients with a communication signal from a transmitter that causes the interference signal.

21. (Original) The transceiver of claim 20, wherein the generating means includes means for generating a digital replica of an echo interference signal in the analog communication signal.

22. (Canceled)

23. (Original) The transceiver of claim 20, further comprising sampling means for sampling the analog communication signal having the analog replica subtracted therefrom, and generating a digital signal that is substantially devoid of the interference signal.

24. (Original) The transceiver of claim 23, further comprising storing means for receiving the digital signal and storing the digital signal on a first-in-first-out basis.

25. (Original) The transceiver of claim 24, further comprising filtering means for receiving the digital signals from the storing means, and filtering individual digital signals.

26. (Original) The transceiver of claim 25, wherein the filtering means includes a least means square (LMS) type adaptive filter.

27. (Original) The transceiver of claim 25, further comprising detecting means. for detecting data from the filtered individual digital signals.

28. (Original) The transceiver of claim 27, wherein the detecting means includes a Viterbi detector.

29. (Original) The transceiver of claim 27, wherein the data is a data symbol.

30. (Original) The transceiver of claim 20, wherein the transceiver is IEEE 1000Base-TX complaint.

31. (Previously presented) A network device in a communication system, the network device comprising:

a transceiver operable to receive an analog communication signal containing an interference signal, the transceiver including,

a receiver to receive the analog communication signal;

a digital compensation circuit to generate a digital replica of the interference signal contained in the analog communication signal;

a converter to convert the digital replica of the interference signal into a corresponding analog replica of the interference signal; and

a subtraction circuit to subtract the analog replica of the interference signal from the analog communication signal,

wherein the digital compensation circuit includes a NEXT canceller to generate a digital replica of a NEXT interference signal in the analog communication signal, and

wherein the digital compensation circuit further:

determines cancellation coefficients that model an impulse response of the interference signal; and

multiplies the cancellation coefficients with a communication signal from a transmitter that causes the interference signal.

32. (Original) The network device of claim 31, wherein the digital compensation circuit includes an echo canceller to generate a digital replica of an echo interference signal in the analog communication signal.

33. (Canceled)

34. (Original) The network device of claim 31, further comprising an analog-to-digital converter (ADC) to sample the analog communication signal having the analog replica subtracted therefrom, and generate a digital signal that is substantially devoid of the interference signal.

35. (Original) The network device of claim 34, further comprising a first-in-first-out (FIFO) buffer to receive the digital signal and store the digital signal on a first-in-first-out basis.

36. (Original) The network device of claim 35, further comprising a feed forward equalizer (FFE) to receive the digital signals from the FIFO buffer, the FFE operable to filter individual digital signals.

37. (Original) The network device of claim 36, wherein the FFE is a least means square (LMS) type adaptive filter.

38. (Currently amended) The network device of claim 36, further comprising a data detector [[t o]] to detect data from the filtered individual digital signals.

39. (Original) The network device of claim 38, wherein the data detector is a Viterbi detector.

40. (Original) The network device of claim 38, wherein the data is a data symbol.

41. (Original) The network device of claim 31, wherein the transceiver is IEEE 1000Base-TX complaint.

42. (Previously presented) A network device in a communication system, the network device comprising:

communication means for receiving an analog communication signal containing an interference signal, the communication means including,

receiving means for receiving the analog communication signal;

generating means for generating a digital replica of the interference signal contained in the analog communication signal;

converting means for converting the digital replica of the interference signal into a corresponding analog replica of the interference signal; and

subtracting means for subtracting the analog replica of the interference signal from the analog communication signal to substantially cancel the interference signal from the analog communication signal,

wherein the generating means includes means for generating a digital replica of a NEXT interference signal in the analog communication signal, and

wherein the generating means further:

determines cancellation coefficients that model an impulse response of the interference signal; and

multiplies the cancellation coefficients with a communication signal from a transmitter that causes the interference signal.

43. (Original) The network device of claim 42, wherein the generating means includes means for generating a digital replica of an echo interference signal in the analog communication signal.

44. (Canceled)

45. (Original) The network device of claim 42, wherein the communication means further includes sampling means for sampling the analog communication signal having the analog replica subtracted therefrom, and generating a digital signal that is substantially devoid of the interference signal.

46. (Original) The network device of claim 45, wherein the communication means further includes storing means for receiving the digital signal and storing the digital signal on a first-in-first-out basis.

47. (Original) The network device of claim 46, wherein the communication means further includes filtering means for receiving the digital signals from the storing means, and filtering individual digital signals.

48. (Original) The network device of claim 47, wherein the filtering means includes a least means square (LMS) type adaptive filter.

49. (Original) The network device of claim 47, wherein the communication means further includes detecting means for detecting data from the filtered individual digital signals.

50. (Original) The network device of claim 49, wherein the detecting means includes a Viterbi detector.

51. (Original) The network device of claim 49, wherein the data is a data symbol.

52. (Original) The network device of claim 42, wherein the communication means is IEEE 1000Base-TX complaint.

53. (Canceled)

54. (Previously presented) A cancellation system for use in a communication system including a communication line, the communication line having a transmitter and a receiver at each end, the cancellation system to reduce interference signals in an analog communication signal received by a receiver, the cancellation system comprising:

a NEXT canceller associated with a receiver, the NEXT canceller to receive a transmitted signal from a local transmitter, the NEXT canceller operable to generate a digital replica NEXT interference signal based on the transmitted signal;

a converter to convert the digital replica of the NEXT interference signal into a

corresponding analog replica of the NEXT interference signal; and

a subtracter to subtract the replica NEXT interference signal from an analog communication signal received by the receiver,

wherein the NEXT canceller is further operable to:

determine cancellation coefficients that model an impulse response of an interference signal; and

multiply the cancellation coefficients with a communication signal from the transmitter.

55. (Canceled)

56. (Previously presented) A cancellation system for use in a communication system including a communication line, the communication line having a transmitter and a receiver at each end, the cancellation system to reduce interference signals in an analog communication signal received by a receiver, the cancellation system comprising:

NEXT cancellation means associated with a receiver, the NEXT cancellation means to receive a transmitted signal from a local transmitter, the NEXT cancellation means for generating a digital replica NEXT interference signal based on the transmitted signal;

converting means for converting the digital replica of the NEXT interference signal into a corresponding analog replica of the NEXT interference signal; and subtracting means for subtracting the replica NEXT interference signal from an analog communication signal received by the receiver, and

wherein the NEXT cancellation means further:

determines cancellation coefficients that model an impulse response of an interference signal; and

multiplies the cancellation coefficients with a communication signal from the transmitter.

57. (Canceled)

58. (Currently amended) A method for reducing interference signals in an analog communication signal received by a receiver of a communication line, the method comprising:

receiving a transmitted signal from a transmitter local to a receiver;

generating a digital replica NEXT interference signal based on the transmitted signal;

converting the digital replica of the NEXT interference signal into a corresponding analog replica of the NEXT interference signal; and

subtracting the replica NEXT interference signal from an analog communication signal received by the receiver, and

wherein generating [a]the digital replica NEXT interference signal includes:

determining cancellation coefficients that model an impulse response of an interference signal; and

multiplying the cancellation coefficients with a communication signal from the transmitter.

59. (Previously presented) A transceiver comprising:

a receiver to receive an analog communication signal, the analog communication signal containing a plurality of interference signals with at least one interference signal being generated by a non-local signal source;

a digital compensation circuit to generate a digital replica of each interference signal contained in the analog communication signal;

a combiner to combine each digital replica to generate a combined digital replica;

a converter to convert the combined digital replica into a corresponding analog replica of the interference signal; and

a subtraction circuit to subtract the analog replica from the analog communication signal,

wherein the digital compensation circuit further:

determines cancellation coefficients that model an impulse response of an

interference signal; and

multiplies the cancellation coefficients with a communication signal from a transmitter.

60. (Previously presented) A method for reducing interference signals in an analog communication signal, the method comprising:

receiving an analog communication signal through a receiver, the analog communication signal containing a plurality of interference signals with at least one interference signal being generated by a non-local signal source;

generating a digital replica of each interference signal contained in the analog communication signal;

combining the digital replica of each interference signal to generate a combined digital replica;

converting the combined digital replica into a corresponding analog replica of the interference signal; and

subtracting the analog replica from the analog communication signal to substantially cancel each interference signal from the analog communication signal,

wherein generating a digital replica of each interference signal includes:

determining cancellation coefficients that model an impulse response of an interference signal; and

multiplying the cancellation coefficients with a communication signal from a transmitter.

61. (Previously presented) A network device in a communication system, the network device comprising:

a transceiver operable to receive an analog communication signal containing a plurality of interference signals with at least one interference signal being generated by a non-local signal source, the transceiver including,

a receiver to receive the analog communication signal;

a digital compensation circuit to generate a digital replica of each interference signal contained in the analog communication signal;

a combiner to combine the digital replica of each interference signal to generate a combined digital replica;

a converter to convert the combined digital replica into a corresponding analog replica of the interference signal; and

a subtraction circuit to subtract the analog replica of the interference signal from the analog communication signal,

wherein the digital compensation circuit further:

determines cancellation coefficients that model an impulse response of an interference signal; and

multiplying the cancellation coefficients with a communication signal from a transmitter.

62. (Previously presented) The transceiver of claim 1, wherein the communication signal includes one or more data symbols.

63. (Previously presented) The method of claim 12, wherein the communication signal includes one or more data symbols.

64. (Previously presented) The transceiver of claim 20, wherein the communication signal includes one or more data symbols.

65. (Previously presented) The network device of claim 31, wherein the communication signal includes one or more data symbols.

66. (Previously presented) The network device of claim 42, wherein the

communication signal includes one or more data symbols.

67. (Previously presented) The cancellation system of claim 54, wherein the communication signal includes one or more data symbols.

68. (Previously presented) The cancellation system of claim 56, wherein the communication signal includes one or more data symbols.

69. (Previously presented) The method of claim 58, wherein the communication signal includes one or more data symbols.

70. (Previously presented) The transceiver of claim 59, wherein the communication signal includes one or more data symbols.

71. (Previously presented) The method of claim 60, wherein the communication signal includes one or more data symbols.

72. (Previously presented) The network device of claim 61, wherein the communication signal includes one or more data symbols.